

Topical Tretinoin in the Treatment of Nail Psoriasis

Sir,

A 12-year-old girl presented with asymmetric fingernail involvement with distal nail disease in the form of subungual hyperkeratosis, distal onycholysis with proximal erythema, and shortening of nails [Figure 1]. The pattern was suggestive of nail psoriasis with predominant nail bed disease. A thorough mucocutaneous examination revealed no further skin or joint manifestations of psoriasis. A nail bed biopsy revealed subungual hyperkeratosis, focal parakeratosis with a neutrophilic infiltrate, and absence of any fungal elements, consistent with a diagnosis of nail psoriasis. For this isolated nail psoriasis, the nail disease severity was evaluated using NAPS (Nail Psoriasis Severity Index) score, which was found to be 25.

The management of isolated nail disease was a challenge in this child. Considering predominant distal nail bed disease with reluctance for injectable therapy, we initiated topical therapy. As there were constraints regarding the high cost of therapy (tazarotene, vitamin D analogs), unacceptable side effects (corticosteroids), and poor availability in the Indian market (tazarotene), we chose to treat with a topical retinoid, tretinoin 0.025% cream, which could be made available through a hospital pharmacy. After approximately 3 months of regular application on the distal nail bed and hyperkeratotic nail plate, an almost complete resolution of nail changes was seen with NAPS at week 12 of the therapy dropping down to 5 [Figure 2]. The patient reported no major adverse effects apart from mild dryness at the digital tips. Thereafter, the frequency of the application was reduced to alternate nights and then to twice a week. There has been no exacerbation over further 6 months of follow-up.

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Isolated nail psoriasis has a prevalence of 5–10% among psoriatic patients.^[1] Nevertheless, it can have a tremendous impact on the quality of life. Management of isolated nail psoriasis can be tricky and depends on the severity of nail involvement and the impact of the disease on quality of life. The treatment options include topical, intralesional, or systemic medications. Systemic therapy is recommended for multiple nail involvement, severe nail disease, or severe impact on quality of life. For few nail diseases, topical therapy is recommended as a first-line option. Topical treatment options reported in the literature include topical corticosteroids, vitamin D analogs, tazarotene, topical calcineurin inhibitors, 5-fluorouracil, and anthralin.^[2] The most commonly used among these are topical corticosteroids, with or without vitamin D analogs;^[3] however, due to a risk of adverse effects on prolonged usage, corticosteroids may not be preferred in nail disease which is slow to respond.

Topical retinoids are a useful steroid-free alternative in a wide range of skin disorders including acne photoaging, post-inflammatory hyperpigmentation, and psoriasis.^[4] Retinoid efficacy in psoriasis is based on their antiproliferative, differentiation normalizing, and anti-inflammatory effects. Although tretinoin is primarily used for acne, photoaging, and hyperpigmentation, its role in cutaneous plaque psoriasis is known. It is also more easily available, and cost-effective as compared to tazarotene. Its preliminary use in our patient showed excellent response within 6 weeks, encouraging us to further extend the treatment duration.

Though the use of tazarotene as a topical treatment for nail psoriasis is well known, that of topical tretinoin has not been reported to the best of our knowledge.

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Figure 1: Asymmetric involvement of six fingernails with psoriasis in the form of subungual hyperkeratosis, and distal onycholysis in a young girl

Based on our experience, we report tretinoin cream as a simple, cost-effective, and easily available retinoid for topical treatment of nail psoriasis, especially with distal disease. Further controlled and comparative studies can help derive more definitive conclusions.

Author contributions

Both the authors have equally contributed to the design of the manuscript, writing of the manuscript and will be accountable for all aspects of the work, along with ensuring accuracy or integrity of the manuscript.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not



Figure 2: Post-treatment photographs at 3 months, showing almost complete resolution of changes in the nails

be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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